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10/781,074	02/18/2004	Todd R. Burkey	XIOT.027PA	1846

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EXAMINER	
LAM, DUNG LE	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,074	BURKEY, TODD R.	
	Examiner	Art Unit	
	Dung Lam	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-24 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Method of channel allocation based on loading".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-24 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 19, the claim language seems to call for a program storage device or a computer readable medium. However, it is not in the proper form. The data structures (program instructions), which are not claimed as embodied in a computer-readable media, are considered descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the data structure and the computer software and hardware

components which permit the data structure's functionality to be realized, and is thus statutory (see page 53 of Interim Guideline).

Furthermore, the claimed "computer readable medium" is defined in the paragraph 39 of the published specification of the present application as a carrier, which is not a statutory subject matter.

Claims 20-24 are also non-statutory subject matter for the same reasons as claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims **1-24** rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (US Patent No. 6826160).

2. Regarding claim **1**, **Wang** teaches a wireless storage network (Fig. 2a, 2b and 3, Abstract), comprising: a first wireless storage node (device A, B, C or D, Figs 2a-2c); a network node (device A, B, C or D, Figs 2a-2c); and a plurality of wireless channels coupling the first wireless storage node and the network node (Fig. 2b and 2c, multiple channels coupled to the different devices, C4 L48-58, Abstract), an assignment of the

plurality of the wireless channels of the first wireless storage node (C10 L55- C11 L30, Steps 305 and 309, Fig. 3) being based upon loading (Steps 303, Fig. 3).

3. Regarding claim **7**, **Wang** teaches a method for providing wireless storage, comprising: assigning a first set of wireless channels to a first wireless storage node (some channels are assigned to device A, see Table 1.1); assigning a second set of wireless channels to a wireless network node are assigned a second set of channels (assignment of channels to device D, Col. 10 L8 – C13 L50, Step 300-312, Fig. 3); monitoring a loading between the wireless network node and at least the first wireless storage node (C10 L37-40, Step 315, C13 L56 -67); and modifying the assignment of wireless channels when the loading between the wireless network node and at least the first wireless storage node changes (C14 L16-26, C10 L37-40).

4. Regarding claim **13**, **Wang** teaches a wireless storage network (Fig. 2a, 2b and 3, Abstract), comprising: a plurality of wireless storage devices (devices A-C, Figs. 2a-2c) having at least one inherent wireless interface each; and a plurality of wireless channels, the wireless channels being assigned to the wireless interfaces of the plurality of wireless storage devices (C10-11, Fig. 3, Table1.1); wherein the load to the plurality of wireless storage devices is balanced by adjusting assignments of the plurality of wireless channels to the plurality of wireless storage devices (C13 L56- C14 L26, Fig 3, Steps 315-318).

5. Regarding claims **2**, **Wang** teaches the wireless storage network of claim 1, wherein the network node comprises a second wireless node (any one of the remaining devices A, B, C or D).

6. Regarding claims **3 and 15**, **Wang** teaches the wireless storage network of claim 1, wherein the loading comprises system loading (Step 303 of Fig. 3).

7. Regarding claims **4 and 16**, **Wang** teaches the wireless storage network of claim 1, wherein the loading comprises loading of the first wireless storage node (C5 L24-38).

8. Regarding claims **5**, **Wang** teaches the wireless storage network of claim 1, wherein the first wireless storage node is assigned a first number of the wireless channels to provide a first bandwidth (C5 L2-9).

9. Regarding claims **6 and 17**, **Wang** teaches the wireless storage network of claim 5, wherein, upon a load change, the first wireless storage node is assigned a second number of the wireless channels to provide a second bandwidth (C5 L24-38).

10. Regarding claim **8**, **Wang** teaches the method of claim 1, wherein the monitoring a loading comprises monitoring a system loading (Step 315 of Fig. 3, C13 L56 -67).

11. Regarding claims **9**, **Wang** teaches the method of claim 1, wherein the monitoring a loading comprises monitoring loading of the first wireless storage node (Step 316, C14 L16 -26).

12. Regarding claims **10**, **Wang** teaches the method of claim 1, wherein the modifying the assignment of wireless channels comprises assigning additional wireless

channels to the first wireless storage node when a larger bandwidth is needed (C17 L8-15).

13. Regarding claims **11**, **Wang** teaches the method of claim 1, wherein the modifying the assignment of wireless channels comprises reducing the number of wireless channels to the first wireless storage node when the wireless network node needs more bandwidth to communicate with a second wireless storage node (C10 L37-44, C14 L 16-26).

14. Regarding claims **12**, **Wang** teaches the method of claim 1, wherein the assigning a second set of wireless channels to a wireless network node further comprises assigning a second set of wireless channels to a wireless storage node (C10 L37-44, C14 L 16-26, Fig. 3).

15. Regarding claim **14**, **Wang** teaches a wireless storage network of claim 13 further comprising at least one wireless network device (Hub 202, Fig. 2a, C7 L32-50) for controlling the assignment of wireless storage devices.

16. Regarding claims **15-18**, they are computer-readable medium claims that corresponds to claims 4-7. Therefore, they are rejected for the same reasons as claims 4-7.

17. Regarding claims **19-24**, they are computer-readable medium claims that correspond to claims 7-12. Therefore, they are rejected for the same reasons as claims 19-24.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER